

DOCKET NO.: THOM-0009

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#95
12/4/03

In Re Application of:

Hugh Frederick Collins

Confirmation No.: 1127

Application No.: 09/589,579

Group Art Unit: 1714

Filing Date: June 7, 2000

Examiner: Margaret B. Medley

For: REJUVENATION AND/OR CLEANING OF CATALYSTS

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INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

- ☒ In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or

before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

- ☐ In accordance with § 1.129(a), this Information Disclosure Statement is being filed in connection with ☐ the first or ☐ second After Final Submission, therefore:

☐ Certification in Accordance with § 1.97(e) is attached; or

☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

- ☐ In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

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or

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- ☐ In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission fee of \$180.00 as set forth in § 1.17(p).

- ☒ Copies of each of the references listed on the attached Form PTO-1449 are enclosed herewith.

- ☐ Copies of references listed on the attached Form PTO-1449 are enclosed herewith

EXCEPT THAT:

- ☐ In view of the voluminous nature of references [list as appropriate], and the likelihood that these references are available to the Examiner, copies are not enclosed herewith.
- ☐ In accordance with § 1.98(d), copies of the following references listed on the attached Form PTO-1449 are not enclosed herewith because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application(s) for which a claim for priority under 35 U.S.C. § 120 have been made in the instant application:
- ☐ Copies of references [list as appropriate] listed on the attached Form PTO-1449 were previously cited by or submitted to the Patent and Trademark Office in prior Application No.

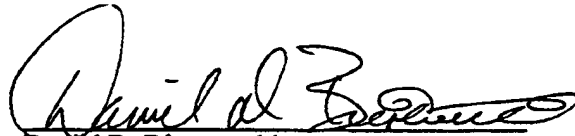
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Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050. This form is submitted in duplicate.

☐ The relevance of those listed references which are not in the English language is as follows:

☒ English language abstracts have been provided for references 9, 10, 11 and 14 which are not in the English language.

Date: August 29, 2003



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Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office				Docket No. THOM-0009		Application No. 09/589,579	
				Applicant Hugh Frederick Collins			
				Filing Date June 7, 2000		Group 1714	
				Confirmation No. 1127			
U. S. PATENT DOCUMENTS							
Examiner Initial		Document No.	Date	Name	Class	Subclass	
	1	4,147,136	04/03/79	Noguchi, et al.	123	3	
	2	4,265,638	05/05/81	Burke	44	56	
	3	4,748,289	05/31/88	Douglas	585	14	
	4	5,141,524	08/25/92	Gonzalez	44	340	
	5	5,266,082	11/30/93	Sanders	44	357	
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	7	5,419,121	05/30/95	Sung, et al.	60	274	
	8	5,688,295	11/18/97	Yang	44	320	
FOREIGN PATENT DOCUMENTS							
Examiner Initial		Document No.	Date	Country	Translation		
					YES	NO	
	9	0 166 006 A1	01/02/86	EPO	X abstract		
	10	0 405 310 A	01/02/91	EPO	X abstract		
	11	WO 97/41336	11/06/97	PCT	X abstract		
	12	WO 01/94013	12/13/01	PCT			
	13	2 333 048 A	07/14/99	Great Britain			
	14	2 493 863	05/14/82	France	X abstract		
EXAMINER				DATE CONSIDERED			

9

POWERED BY Dialog

Motor fuel.***Motor-Kraftstoff.******Combustible pour moteurs.*****Assignee:**

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Patent

C untry Code/Number	Kind	Date
EP 152514	A2	August 28, 1985 (Basic)
EP 166006	A1	January 02, 1986

Application

Country Code/Number	Date
EP 84106899	June 16, 1984

Priority Application Number (Country Code, Number, Date): EP 84106899 (840616)**Designated States:** AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE**International Patent Class:** C10L-001/02**Cited Patents (EP A):** FR 2251614 A; US 4333739 A; DE 2806673 A**Abstract:** EP 166006 A1 (Translated)

Motor fuels based on lower alcohols according to Patent Application 33.08433.5 contain additions of mixtures of C5)))/C6)))- and C5)))-C7)))- hydrocarbons as well as petrol and mixtures of C4)))- hydrocarbons.

12

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



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PCT

(10) International Publication Number
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- (51) International Patent Classification⁷: B01J 38/04 (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
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- (26) Publication Language: English
- (30) Priority Data:
09/589,579 7 June 2000 (07.06.2000) US
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant and
(72) Inventor: COLLINS, Hugh, Frederick [GB/GB]; 4 Myrtle Grove, Waterloo, Liverpool L22 2AG (GB).
- Published:
— with international search report
- (74) Agent: W.P. THOMPSON & CO.; Coopers Building, Church Street, Liverpool L1 3AB (GB).
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: REJUVENATION AND/OR CLEANING OF CATALYSTS

44

WO 01/94013 A1

(57) Abstract: One aspect of the invention provides a rejuvenating and/or cleaning composition for a catalyst of a vehicle catalytic converter, comprising at least one hydrocarbon source and at least one oxygen donor. The inventive composition can also comprise a hydrocarbon source and an oxygen donor wherein said composition generates an organic acid vapour on combustion. Preferably, the inventive compositions comprise one or more organic solvents selected from isopropyl alcohol, acetone, xylene and paraffin (kerosene). The invention also provides a method of rejuvenating and/or cleaning a catalyst in a vehicle catalytic converter, in situ, in a vehicle i.e. without removal of the catalyst from the vehicle, said method comprising: (i) bringing the catalytic converter up to working temperature; and then (ii) passing the aforementioned compositions into an engine of the vehicle whilst running the engine at idle. A similar method comprises: (i) bringing the vehicle engine to working temperature; (ii) disconnecting the vehicle's fuel line from the engine; (iii) connecting the engine to a means for feeding any rejuvenating and/or cleaning composition thereto; and (iv) feeding the cleaning composition into the engine whilst the engine is running at a temperature high enough to effect cleaning of the catalyst. The atmosphere. Another aspect of the invention provides a method of rejuvenating and/or cleaning a catalyst of a vehicle catalytic converter without removal of the catalyst from the vehicle, the vehicle having an engine and a fuel tank, said method comprising the steps of: (i) introducing the cleaning composition into the fuel tank, said tank already containing a quantity of fuel; and then (ii) running the engine of the vehicle to effect cleaning of the catalyst.

⑫ **EUROPÄISCHE PATENTANMELDUNG**

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⑯ Int. Cl.: C 10 L 1/02

⑰ Anmeldetag: 16.06.84

⑱ Veröffentlichungstag der Anmeldung: 02.01.85
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⑲ Anmelder: Union Rheinische Braunkohlen Kraftstoff
Aktiengesellschaft, Ludwigshafener Strasse o. Nr.
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⑳ Benannte Vertragsstaaten: AT BE CH DE FR GB IT LI LU
NL SE

㉑ Erfinder: Müller, Heinrich, Dr., Röntgenstrasse 4,
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Erfinder: Kelm, Karl-Heinz, Hühnering 31,
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㉒ Motor-Kraftstoff.

㉓ Die Erfindung betrifft Kraftstoffe auf Basis niederer Alkohole nach Patentanmeldung 33.08433.6, die Zusätze an Gemischen von C_2/C_3 , C_2-C_3 -Kohlenwasserstoffen sowie Benzin und an Gemischen von C_4 -Kohlenwasserstoffen enthalten.

19
EP 0 166 006 A1